

WHAT IS CLAIMED IS:

1. A method for correcting vision in an eye, the eye having a cornea with an external surface and an optical axis, comprising the steps of
separating a portion of the cornea to form first and second internal surfaces,
and
placing at least one microscopic lens in between the first and second internal surfaces, so that the external surface of the cornea is not substantially displaced by the at least one microscopic lens.
2. A method according to claim 1, wherein
the separating step includes separating the portion of the cornea to form a corneal flap.
3. A method according to claim 2, and further including the steps of
removing the corneal flap to expose the first internal surface, and
replacing the corneal flap after the at least one microscopic lens has been placed in between the first and second internal surfaces.
4. A method according to claim 1, wherein
the at least one microscopic lens has a power of about plus one to about plus three diopters.
5. A method according to claim 1, wherein
the placing step includes placing at least 50 microscopic lenses, each having a thickness of about 2-3 microns on at least one of the first and second internal surfaces, so that the external surface of the cornea is not substantially displaced by the at least 50 microscopic lenses.

6. A method according to claim 5, wherein
each of the at least 50 microscopic lenses has a power of between about plus one to about plus three diopters.
7. A method according to claim 5, wherein
each of the 50 microscopic lenses is substantially ring shaped.
8. A method according to claim 1, wherein
said placing step includes placing the at least 50 microscopic lenses in concentric circles around the optical axis so that they create bifocal vision.
9. A method according to claim 1, wherein
the placing step includes placing a first set of at least 20 microscopic lenses of about 1.5 diopters of in a first concentric circle around the optical axis and a second set of at least 20 lenses of about 2 diopters in a second concentric circle around the optical axis so that the first and second sets of at least 20 lenses form multifocal vision.
10. A method according to claim 1, wherein
the placing step includes placing at least one microscopic lens concentric about the optical axis of the eye.
11. A method according to claim 10, wherein
the placing step includes placing the at least 2 microscopic lenses concentric about the optical axis.
12. A method according to claim 1, wherein
the at least one microscopic lens has a diameter of about one millimeter.

13. A method according to claim 1, wherein

the at least one microscopic lens has a thickness of about 2-3 microns, so that when the microscopic lens is inserted in between the first and second internal surfaces, the first and second surfaces are not substantially displaced.

14. A method according to claim 1, wherein

the at least one microscopic lens is substantially ring shaped.

15. A method for correcting vision in an eye, the eye having a live cornea, comprising the steps of

separating an internal area of the live cornea into first and second internal surfaces to form a corneal flap, the first internal surface facing in a posterior direction of the live cornea and the second internal surface facing in an anterior direction of the live cornea,

removing the corneal flap from the cornea to expose the first and second internal surfaces,

placing at least one microscopic lens having a thickness of about 2-3 microns on at least one of said first and second internal surfaces to allow at least bifocal vision, and

replacing the flap.

16. A method according to claim 15, wherein

the at least one microscopic lens has a power of about plus one to about plus three diopters.

17. A method according to claim 15, wherein

the placing step includes placing at least 50 microscopic lenses on at least one of the first and second internal surfaces.

18. A method according to claim 17, wherein
each of the at least 50 microscopic lenses has a power of between about plus one to about plus three diopters.
19. A method according to claim 17, wherein
each of said 50 microscopic lenses is substantially ring shaped.
20. A method according to claim 15, wherein
the placing step includes placing the at least 50 microscopic lenses so that they allow multifocal vision.
21. A method according to claim 15, wherein
the at least one microscopic lens has a diameter of about one millimeter.
22. A method according to claim 15, wherein
the at least one microscopic lens is substantially ring shaped.